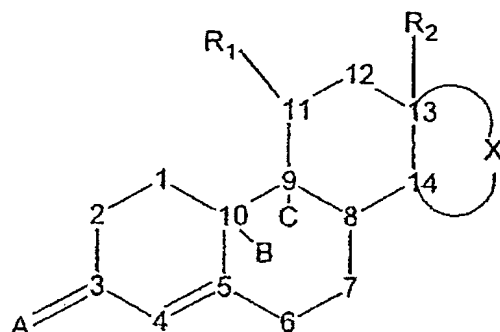


CLAIMS

1. The use of the compounds of formula (I)

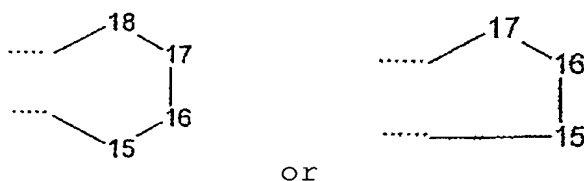


5 in which:

- R_1 represents an organic radical containing from 1 to 18 carbon atoms, containing at least one nitrogen, phosphorus or silicon atom, the atom immediately adjacent to carbon 11 being a carbon atom,

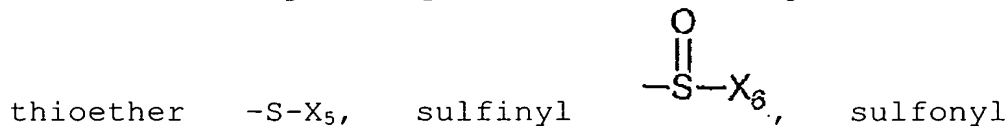
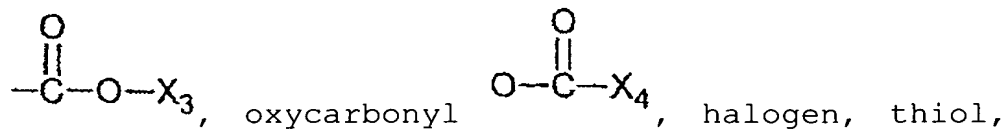
- R_2 represents a hydrocarbon-based radical containing from 1 to 8 carbon atoms,

15 - X of formula:

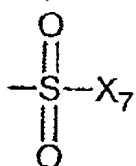
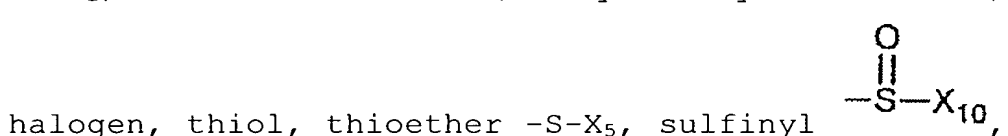
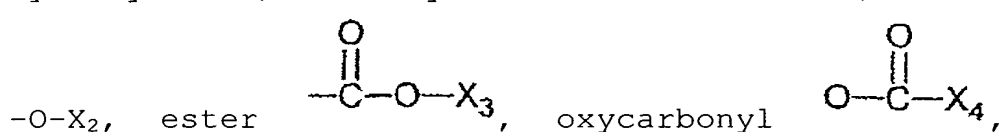
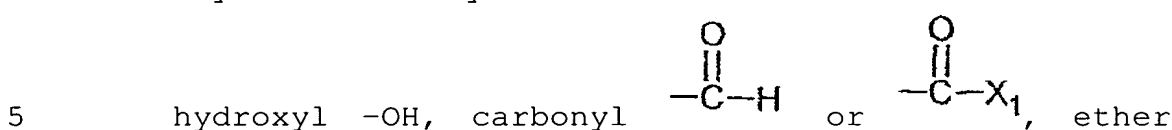


20 represents the residue of a saturated or unsaturated, pentagonal or hexagonal ring optionally substituted with one or more groups chosen from the following radicals: C_1 - C_{12} alkyl, alkenyl, alkynyl, aryl or aralkyl, hydroxyl -OH,

25 carbonyl $\begin{array}{c} \text{O} \\ || \\ -\text{C}-\text{H} \end{array}$ or $\begin{array}{c} \text{O} \\ || \\ -\text{C}-\text{X}_1 \end{array}$, ether -O- X_2 , ester

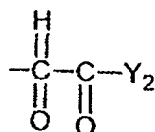


, and also $\text{C}_1\text{-C}_{12}$ alkyl, alkenyl, alkynyl, aryl or aralkyl substituted with one or more



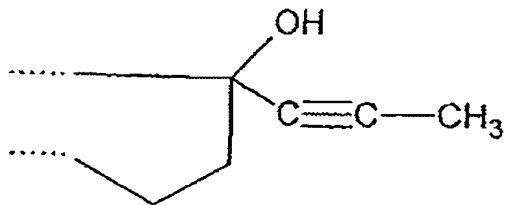
or sulfonyl functions, with $\text{X}_1, \text{X}_2, \text{X}_3, \text{X}_4, \text{X}_5, \text{X}_6$ and X_7 representing $\text{C}_1\text{-C}_8$ alkyl, $\text{C}_2\text{-C}_8$ alkenyl or $\text{C}_2\text{-C}_8$ alkynyl groups, or $\text{C}_6\text{-C}_{15}$ aryl or $\text{C}_6\text{-C}_{15}$ aralkyl groups,

15 - the group $\text{C}=\text{A}$ in the 3-position represents an oxo group, which is free or blocked in the form of a ketal, an alcohol $-\text{CH}-\text{OH}$, ether $-\text{CH}-\text{O}-\text{Y}_1$, alkyl



carboxylate, $\text{C}=\text{NOH}$ or $\text{C}=\text{NO}-\text{Y}_3$ group, or a CH_2 group, Y_1, Y_2 and Y_3 representing an alkyl radical containing from 1 to 8 carbon atoms or an aralkyl group containing from 7 to 15 carbon atoms, and

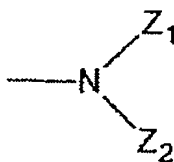
- 5 - B and C together form a double bond or an epoxide bridge, and of the derived salts, for preparing a medicinal product capable of modulating (activating or inhibiting) the Hedgehog protein signaling pathway, intended for the treatment of pathologies involving a tissue dysfunction linked to deregulation of this pathway.
- 10 2. The use of the compounds as claimed in claim 1, characterized in that R_2 represents a linear or branched, saturated alkyl radical containing from 1 to 4 carbon atoms, preferably a methyl radical.
- 15 3. The use of the compounds as claimed in claim 1 or claim 2, characterized in that X represents an optionally substituted pentagonal ring.
- 20 4. The use of the compounds as claimed in claim 3, characterized in that said pentagonal ring is substituted with at least one alkenyl or alkynyl group, preferably with an alkynyl group, preferably in the 17-position.
- 25 5. The use of the compounds as claimed in claim 3 or claim 4, characterized in that said pentagonal ring is also substituted with at least one hydroxyl group.
- 30 6. The use of the compounds as claimed in claim 5, characterized in that X represents the residue of a pentagonal ring of formula:



7. The use of the compounds as claimed in any one of claims 1 to 5, characterized in that R₁ represents a hydrocarbon-based radical containing from 1 to 18 carbon atoms and containing at least one nitrogen atom, selected from:

- the R₁ values which represent a primary, secondary or tertiary alkyl radical containing from 1 to 8 carbon atoms, in particular a methyl, ethyl, n-propyl, isopropyl, butyl, isobutyl, tert-butyl, pentyl, hexyl, cyclopropyl, cyclobutyl, cyclopentyl or cyclohexyl radical, containing at least one nitrogen atom or substituted with a heterocycle containing at least one nitrogen atom and optionally substituted with an alkyl radical containing from 1 to 8 carbon atoms, such as a methyl, ethyl or n-propyl radical, in particular 3,4- or 2-pyridyl radicals, the thiazolyl radical or the piperidiny radical, and

- the R₁ values which represent an aryl or aralkyl radical carrying an amine function, in particular a phenyl or benzyl radical carrying an amine function:



in which Z₁ and Z₂, which may be identical or different, represent a linear, branched or cyclic alkyl radical containing from 1 to 8 carbon atoms, it being possible for Z₁ and Z₂ to be optionally combined so as to form a heterocycle with the nitrogen atom.

8. The use of the compounds as claimed in claim 7, characterized in that Z₁ and Z₂ represent a C₁-C₄ alkyl radical, and preferentially a methyl

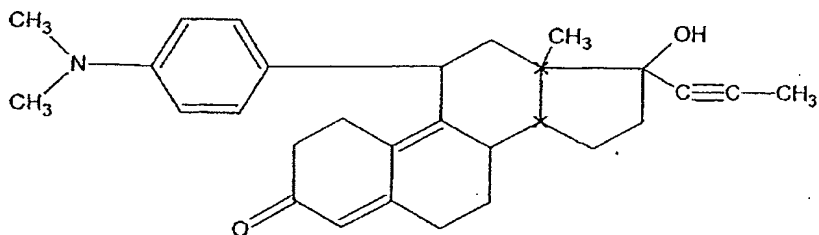
radical.

9. The use of the compounds as claimed in any one of
claims 1 to 8, characterized in that the group C=A
5 in the 3-position represents an oxo group.

10. The use of the compounds as claimed in any one of
claims 1 to 9, characterized in that B and C
together form a double bond.

10

11. The use of the compounds as claimed in any one of
claims 1 to 10, characterized in that said
compound of formula (I) is 17 β -hydroxy-11 β -(4-
dimethylaminophenyl)-17 α -(prop-1-ynyl)estra-4,9-
15 dien-3-one of formula:



12. The use of the compounds as claimed in any one of
claims 1 to 11, characterized in that said
20 medicinal product is intended for the treatment of
tumors linked to hyperactivation of the Hedgehog
pathway.

13. The use as claimed in claim 12, characterized in
25 that said tumors are chosen from nervous tissue
tumors (medulloblastomas, primitive neuroecto-
dermal tumors, glioblastomas, meningiomas and
oligodendrogliomas), skin tumors (basal cell
carcinomas, trichoepitheliomas), muscle and bone
30 tissue tumors (rhabdomyosarcomas, osteosarcomas)
and tumors of other tissues (kidney, bladder).

14. The use of the compounds as claimed in any one of

claims 1 to 11, characterized in that said medicinal product is intended for the treatment of neurodegenerative-type pathologies.

- 5 15. The use of the compounds as claimed in any one of claims 1 to 11, characterized in that said medicinal product is intended for the treatment of diabetes.